



USAID
FROM THE AMERICAN PEOPLE

AGRIBUSINESS AND TRADE PROMOTION (USAID ATP)

In fulfillment of the following deliverable under task A 3.1.3:

Annual List of Target Investments in Market Logistics Infrastructure with a “Mini-Strategy” for Facilitating Public / Private Investment for Each Target Investment Maize (FY 2010)

Contract/ Project No.: EDH-1-00-00005-08

Submitted to: Michael L. Wyzan Ph.D.
COTR
Agribusiness and Trade Promotion Project
USAID/WA/RAO
Accra, Ghana



Abt Associates Inc. ■ 4550 Montgomery Lane, Suite 800 North ■
Bethesda, Maryland 20814 ■ Tel: 301.347.5000. ■ Fax: 301.913.652.9061
■ www.abtassociates.com

In collaboration with:
ACDI/VOCA
CARANA Corporation



USAID
FROM THE AMERICAN PEOPLE

TARGET INTERVENTIONS IN MARKET LOGISTICS INFRASTRUCTURE AND OTHER PPPS

AGRIBUSINESS AND TRADE PROMOTION (ATP)

DECEMBER 2010

DECEMBER 2010

This publication was produced for review by the United States Agency for International Development. It was prepared by Abt Associates in association with CARANA Corporation for the Agribusiness and Trade Promotion Project.

CARANA Corporation. December, 2010. *Target Interventions in Market Logistics Infrastructure and Other PPPs - Maize*. Agribusiness and Trade Promotion Project, Abt Associates Inc.

Contract/Project No.: EDH-1-00-05-00005-00-8

Submitted to: Michael Wyzan, Ph.D., COTR
Agribusiness and Trade Promotion program
USAID/WA/ANRO
Accra, Ghana



Abt Associates Inc. | 4550 Montgomery Avenue | Suite 800 North
| Bethesda, Maryland 20814 | T. 301.347.5000 | F. 301.913.9061
| www.abtassociates.com

TARGET INTERVENTIONS IN MARKET LOGISTICS INFRASTRUCTURE AND OTHER PPPS

AGRIBUSINESS AND TRADE PROMOTION (ATP)

DECEMBER 2010

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government

CONTENTS

Contents.....	ix
1. Introduction.....	1
2. Targeted interventions in market logistics infrastucture	5
2.1 Advocacy for dedicated loading and unloading zones	5
2.2 Increase use of scales.....	5
2.3 Advocacy for dedicated bags.....	5
3. Potential public-private partnership for each intervention with a mini strategy for implementation	7

I. INTRODUCTION

The Techiman-Ouagadougou and Techiman-Kantchari Corridors are the principal North-South corridors for land transport between primary production (Techiman) and consumption (Ouagadougou, Niamey) zones for maize. The Techiman-Ouagadougou corridor is approximately 616km long, crossing the border at Paga/Dakola, while the Techiman-Kantchari Corridor is approximately 882 km long, crossing the border at Bittou.

The maize value chain essentially is a **system of interconnected markets**, with limited intra-regional trade between them and very little market logistics infrastructure in or between markets.

The following table summarizes the primary market logistics infrastructure in the maize value chain along the Techiman – Ouagadougou and Techiman – Kantchari corridors. Generally speaking, there is little to no infrastructure between markets (storage, loading/unloading areas) and so this inventory focuses on observed logistics infrastructure (or lack thereof) in the principal maize markets.

TABLE 1: MAIZE MARKET LOGISTICS INFRASTRUCTURE OBSERVED

PRINCIPLE MAIZE MARKETS	TECHIMAN	OUAGADOUGOU (SANKARYARÉ)	POUYTENGA	FADA N'GOURMA	KANTCHARI	LEO	BITTOU
DESCRIPTION	Largest maize market in West Africa, serving primarily Brong Ahafo and Ashanti production regions. Total market dimension 499,750 m ² , of which approximately 75,000 – 100,000 m ² dedicated to cereals. Market is every week, Wed-Fri.	Important local wholesale market serving both Ouagadougou and domestic supply needs. Maize area consists of two main side roads with small 20m ² storage spaces and informal outdoor storage on the street.	Important market for Eastern Burkina Faso, serving as hub for both domestic commerce (to/from Ouagadougou) and exports to Niger, and imports from Ghana (seasonal). Market consists of approximately 3 ha, with formal storage sheds with allotted space for wholesalers. Estimated 8 full truckloads observed. Market is every 3 days.	Market renovated in 2003-4 by Swiss International Development Agency. Maize market mostly for local consumption, however does have some transit storage and moderate speculation between markets (Ouaga, Pouytenga, Niamey). Maize traders rent small 10m ² storage spaces.	Weekly border market that serves both for local consumption and (often) informal exports to Niger. Market has some stall space, thatched huts, dirt floor and no observed maize storage. The assessment team was not able to visit on market day, but was told that at least 2-3 40 T trucks come every week to either the Kantchari market or direct to farms from Niger and back to Niamey without official export documents.	Weekly border market in central south Burkina Faso, 165 km from Ouagadougou. This market serves as a principal market for intra-regional commerce between Ghana and Burkina Faso. It is approximately 2 hectares.	Weekly border market situated in the central eastern part of Burkina Faso, 230km from Ouagadougou. It is a border market where mostly small retailers buy and sell directly to traders in the larger interior markets (Fada, Pouytenga, Tenkodogo)
ADMINISTRATIVE AUTHORITY	Public management (Municipal Authority) with recognition of Maize Buyers-Sellers Association. Due to market expansion, maize market is chaotic, non-paved with minimal thatch roofed huts. No coordination of truck entrance, exit or parking.	<i>Unknown</i>	Public management by municipal authority, but with limited private sector involvement in management. Maize merchant association has limited voice and has been unsuccessful at negotiating a PPP with municipal authority.	Public management by Municipal Authority, with revenue generation from merchant stall rentals and 11 full time employees. Includes security services, sanitation, waste management.	<i>Unknown</i>	The market is managed by the commune (mairie)	A local public authority manages the market.
FINANCING	No new infrastructure in years, municipal authority collects 0,30 GH¢ / bag to cover annual waste	<i>Unknown</i>	Swiss Cooperation initially renovated the market, with investment of ~\$2MM. Potential annual revenue	<i>Unknown</i>	<i>Unknown</i>	Combination of Government and local authority	Financed by the local authority

PRINCIPLE MAIZE MARKETS	TECHIMAN	OUAGADOUGOU (SANKARYARÉ)	POUYTENGA	FADA N'GOURMA	KANTCHARI	LEO	BITTOU
	management costs		from stall rentals at \$160,000/year, with fixed costs of \$50/year.				
COMMERCE	Average of 80,000 mT per week (8,000 sacs of 100Kg), mostly traders and wholesalers	Mostly wholesalers	Mostly wholesalers, some retailers	Mostly small retailers, some wholesalers	Mostly retailers, some wholesalers	Wholesalers and retailers	Mostly small retailers (3-5 bags)
INFRASTRUCTURE							
ENCLOSURES	Basic thatch huts for less than 10% of observed market (for small 1GH¢ /week fee)	Wholesaler space in retail storefronts, not adequately suited for grain trade, storage, or commerce. Maize stored on street or in cement enclosure	Wholesaler space designation with limited structures.	Many enclosures and types of commercial space (small stands/kiosks, small storage areas, and stalling for work areas.	Very limited, mostly thatch and open air.	No enclosures, all open air.	No enclosures, all open air
BUILDINGS	None observed, except for open air aluminum sided "Maize office" with no electricity	Part of downtown Ouagadougou, all buildings that seem to have been build for another purpose but retrofitted as a wholesale market	Two small warehouses, no other awnings or shade available.	Fully built market, with brick, stone and metal storage areas, concrete stalling and work areas (e.g., bagging), awnings and shade (trees).	None present	1 small building in the middle of the market for food service and shade	No buildings
STORAGE	None observed in or near the market	Storage space observed at wholesalers' retail presence – storefronts of 10-20m2 converted into storage facilities. Little ventilation.	Storage space observed, with capacity for 200T and 100T respectively. Some smaller stalls have small storage capabilities, but rest of product is outdoors and trucked in and out.	Storage spaces of 10m2 available for rent, must be locked by key at night (or face fine). Very orderly and well maintained for the most part. Somewhat limited ventilation, and one vendor shared that municipal authority is slow at repairing space when damaged (4 months and her floor is still in need of repair).	<i>Unknown</i>	Stores are 10-20m2, built from loose brick and covered by tarps.	10m2 modern and small storage sheds
UTILITIES	None observed	None observed	Water - yes, no electricity or food services observed.	~~~	None observed	None observed	None observed

PRINCIPLE MAIZE MARKETS	TECHIMAN	OUAGADOUGOU (SANKARYARÉ)	POUYTENG	FADA N'GOURMA	KANTCHARI	LEO	BITTOU
SANITATION / OTHER SERVICES	One toilet observed, no formal food service areas	None observed	Latrines and Mosque	Toilets, water, electricity	None observed	None observed	None observed
EQUIPMENT	None. Absence of scales, drying, shelling in market. Some outdated shelling machines observed on busy road outside market.	Most wholesalers have scales.	Almost all vendors have a scale, and those who don't can rent one when needed.	Stalls, bagging areas, scales observed at most vendors.	None observed	No observed scales in the market, all measure by tin or yoruba.	No observed scales in the market, all measure by tin or yoruba.
INBOUND / OUTBOUND							
TRUCK PARKING / ROUTES	None, on narrow road and in market, causing unnecessary delays. Queue at entrances and exits to pay department tax.	None, trucks must maneuver through busy city street	None, trucks must maneuver through busy city street	None, trucks must maneuver through busy city street	None, trucks must maneuver through busy city street	None, trucks must maneuver through busy city street	None, trucks must maneuver through busy city street
PEDESTRIAN ROUTES	None, sellers place goods throughout market with no designated walking or transit areas.	None, wholesaler storage shops on busy street	No pedestrian routes	Dedicated pedestrian zones in the Fada N'Gourma market – adequate for retailer business, but not conducive to wholesale business	Limited pedestrian zones as trucks do not appear to be able to physically enter the market	Very narrow pedestrian path, encumbered by sun drying maize on the ground	A small sidewalk available for pedestrians, but not well maintained
DEDICATED LOADING / UNLOADING ZONES	None, trucks park on road and in market to load and unload	None, trucks park on busy street, blocking traffic	None, trucks park on busy street or in the middle of the market, blocking traffic	None, trucks park on busy street, blocking traffic	None, trucks park on busy street, blocking traffic	None, trucks park on busy street, blocking traffic	None, trucks park on busy street, blocking traffic

2. TARGETED INTERVENTIONS IN MARKET LOGISTICS INFRASTRUCTURE

2.1 ADVOCACY FOR DEDICATED LOADING AND UNLOADING ZONES

The most critical market infrastructure element missing from all markets visited is dedicated loading and unloading zones. In each of the markets observed, it is not uncommon for trucks to be delayed 4-6 hours because they are parked in the middle of the market, parked along a busy street, or unable to effectively maneuver to load and unload goods. In the Techiman market, for example, trucks are allowed to enter the market from multiple directions, causing significant delays, confusion, and often resulting in accidents when trucks end up in the ditch trying to pass another parked truck. The ATP project can play a role in reducing unnecessary delays in the primary intra-regional commerce markets of Techiman and Pouytenga by working with the local authorities to suggest new traffic flow guidelines. For example, in Techiman, trucks should be allowed to enter from only one of the gates, making the current two-way lane a one-way lane with one side for parking and the other for free movement of trucks. This would be an interim solution to dedicated loading and unloading zones.

2.2 INCREASE USE OF SCALES

In most of the markets observed, traders and wholesalers do not use scales to verify the actual weight of the product. While this may not result in a significant cost burden to the value chain, it is indicative of the informality and lack of professionalism in the system.

2.3 ADVOCACY FOR DEDICATED BAGS

There is a great deal of time, energy and resources being spent on multiple types of bags in the value chain that are not adequate for maize storage. While most of Ghana's domestic maize shipments are in the Ghana Cocoa Board bag, bags that leave Ghana for intra-regional commerce are often used, ripped, and not cleaned between uses. This is a potential risk for spreading of disease, and results in additional product losses. The current price of bags in the market (between 0.50 and 2.00 GH¢) seems high for used bags of this nature. One person interviewed suggested that Ministry of Agriculture may be working on the introduction of a bag specific to maize. It is suggested that the ATP maize value chain team follow-up on this issue to determine the feasibility of introducing a lower-cost, more appropriate bag for the value chain.

3. POTENTIAL PUBLIC-PRIVATE PARTNERSHIP FOR EACH INTERVENTION WITH A MINI STRATEGY FOR IMPLEMENTATION

In preparation for this assessment, the ATP Project shared with the research team a document entitled “USAID ATP / E-ATP Approach to Public-Private Partnerships.” This document describes the four initial criteria to which any potential Public Private Partnership (PPP) must adhere:

1. **Private Sector Partnership.** The activity involves a private sector actor (corporation, lead firm, business association, foundation, institute and nongovernmental organization or NGO). In some cases, a public sector actor such as a local community may be involved, particularly for the development of market infrastructures: docking platform, slaughterhouse, small-scale packing, sorting, grading, drying, and cold storage facilities, etc.
2. **Contribution.** The private sector contribution (in cash or in-kind) encompasses the provision of key products or services not available (to the same extent or quality) to other value chain actors, such as access to market, input, technology, innovation, information, finance and equipment.
3. **Resource Mobilization.** There is a cost-sharing mechanism (in-kind or cash) that allows USAID ATP/E-ATP to solve problems and achieve deeper development impact that they would not have achieved relying exclusively on its own resources.
4. **Regional Dimension.** The intervention must have an impact on intra-regional trade.
5. **Mini-Strategy** for suggested implementation approach.

Throughout the interviews, the field research team kept an open ear to any potential stakeholder or partner that could be in a position to engage in further discussions on Public-Private Partnerships. The most difficult criteria to meet is, not surprisingly, the contribution and resource mobilization criteria as many of the stakeholders interviewed in the maize value chain are small-scale, informal actors. That said, there were a few noteworthy ideas that emerged throughout the conversations. These are detailed in the table on the following pages.

TABLE 2: LIST OF POTENTIAL PUBLIC-PRIVATE PARTNERSHIPS IN LOGISTICS INFRASTRUCTURE

PPP Identified	Private Sector Partnership	Contribution	Resource Mobilization	Regional Dimension	Suggested Mini-Strategies for Implementation
PILOT MAIZE WAREHOUSE RECEIPT PROGRAM IN BURKINA FASO Potential PPP Partners: <ul style="list-style-type: none"> • SEGAS-BF • Ministry of Agriculture • Banks (TBD) • NGO (e.g., AfriqueVerte) 	<p>Mr. Leonard Ouedraogo, General Manager of SEGAS-BF has expressed strong interest in establishing a network of industrial and agricultural warehouses in Burkina Faso in order to 1) provide needed storage and services to improve product quality; 2) reduce losses from poor storage and poor quality product; 3) establish a system of agricultural guarantees for micro and SME lending; 4) enable more effective and efficient price speculation in agricultural markets; and 5) establish a network of warehouses between Burkina Faso, Ghana, Niger to improve intra-regional maize trade, transport and maize market prices.</p>	<p>SEGAS-BF is contemplating investing its own resources to build and operate a network of warehouses, and has already identified Government of Burkina Faso assets (idle warehouses) that may be made available for the project. Additionally, AfriqueVerte has identified potential public resources (e.g., donated land in Fada N'Gourma) for such an endeavor and is interested in participating in some fashion.</p> <p><i>Project seeking assistance with feasibility study, equipment purchase, technical assistance on warehouse receipt program operations and ownership structure, and facilitating additional partners.</i></p>	<p>Exact resource mobilization to be determined, but will likely include the following components:</p> <ul style="list-style-type: none"> • SEGAS-BF Cash and In-Kind resources • Ministry of Agriculture in-kind resources • AfriqueVerte in-kind resources • Revenue generation from business operations • Reduced cost and quality services available to producers, transporters and traders • Credit available to producer and traders to improve production yields and increased commercial capacity 	<p>Increased storage capacity for both local production and intra-regional trade encourages market speculation both domestically and in regional markets.</p> <p><i>Project should be integrated with the Ghana Grains Company Ltd. Warehouse Receipts Program.</i></p>	<p>It is important to note that SEGAS-BF has already envisioned and intends to launch in December 2010.</p> <p>Mini-strategy:</p> <ul style="list-style-type: none"> • Meet with Mr. Ouedraogo immediately to define an MOU to collectively develop a business plan • Develop a sound business plan for the commercial development of grain storage facilities • Engage small to medium wholesalers and traders in sensitization discussions on commercial storage and warehouse receipts programs • Formally define and develop the warehouse receipts program for Burkina Faso
MARKET LOGISTICS SERVICES IN THE TECHIMAN MAIZE MARKET Potential PPP Partners:	<p>Mrs. Velegda B. Mamounata of Ets. Velegda has expressed interest in exploring a PPP in the Techiman Market. As a full-scale agro-importer and agro-exporter, her company</p>	<p>By fostering a competitive provisioning of bagging, sewing and loading services in the Techiman Market, the PPP can provide improved logistics services at a lower cost,</p>	<p>Ets. Velegda should share the cost of the feasibility study in the form of cash and/or in-kind technical assistance</p> <p>Techiman Municipal Authority may</p>	<p>It is estimated that the inefficient bagging, loading and unloading services in the Techiman Market represent over 7% of the final price of maize in end markets. An</p>	<p>Mini-strategy:</p> <ul style="list-style-type: none"> • Consult with USAID/Advance Project to discuss market logistics services in the Techiman Market; • Consult with Techiman Market Municipal

<ul style="list-style-type: none"> Ets. Velegda Techiman Municipal Authority Maize Buyers-Sellers Association 	<p>has expert knowledge on providing low-cost and effective market logistics such as bagging, sewing, drying, cleaning, storage and other services that are currently absent in or near the Techiman Market.</p> <p><i>Project not yet contemplated, but there is interest in discussing the feasibility of establishing and “in-market” service provider in the Techiman Market.</i></p>	<p>resulting in reduced losses from poor bagging and handling. Current estimates in the Techiman Market suggest over \$19,000/week (~\$1MM/year) is spent on bagging and handling services in the Techiman maize market. There is a sizeable opportunity for a more organized, efficient and competitively priced service in the market.</p> <p><i>Project would need assistance from ATP with feasibility study, equipment purchase, facilitating partnership with Techiman Municipal Authority and Maize Buyers-Sellers Association.</i></p>	<p>participate by authorizing establishment of formal commercial activity within the market, and could be asked to establish a loading / unloading zone for this purpose;</p> <p>The Maize Buyers-Sellers Association should be consulted and potentially strengthened to help organize this service</p>	<p>effort to establish a competitive service provider(s) in the market could reduce this cost, reduce resulting transport losses, and result in increased trade due to potential reduced product price in Techiman market.</p>	<p>Authority and Maize Buyers-Sellers Association on need for more competitive market services, and uncover potential role for their partnership in this endeavor;</p> <ul style="list-style-type: none"> Build a draft business plan that includes realistic projections of market volume and accurately estimates potential costs Approach a large agro-trader like Ets. Velegda to discuss potential partnership on initial feasibility plan, including joint funding of plan Incorporate Technical Assistance to Maize-Buyers Sellers Association and close coordination with Techiman Municipal Authority.
<p>BUILD-OPERATE-TRANSFER FOR RENOVATED TECHIMAN MAIZE MARKET</p> <p>Potential PPP Partners:</p> <ul style="list-style-type: none"> Techiman Municipal Authority MOFA Investor TBD Market Management Company TBD Maize Buyers- 	<p>The Techiman Municipal Authority has developed a plan to fully renovate the Techiman Market, including the establishment of: 1) bulk handling facilities; 2) loading / unloading zones; 3) designated truck parking areas; 4) infrastructure for merchant stalling; and 5) increased “in-market” storage capacity. They are currently talking to the Ghanaian MOFA about potential</p>	<p>Given the importance of the Techiman Market (500,000m²) and current condituion (minimal infrastructure and poor upkeep), this is a sizeable project that would embrace more than just maize commerce, but likely incorporate all domestic and intra-regional food commerce. The grains area of the market is distinct, and there could be an opportunity to re-purpose the proposed</p>	<p>A relevant example from the Fada N’Grouma market suggests that revenue contribution may be seen both in terms of initial funds available, but also potential for revenue generation. In Fada N’Gourma, the \$2MM market renovation enabled a \$160,000/year increased revenue base for the municipal authority on a \$25,000/year</p>	<p>Currently, inefficiencies at the Techiman Market have a negative affect on intra-regional trade: Poor quality product results in high storage losses in end markets; Poor quality bag handing results in transport losses and storage losses in end markets; Lack of truck parking and dedicated loading/unloading zones results in excessive delays (~4-6</p>	<p>Mini-strategy:</p> <ul style="list-style-type: none"> Sit down with Techiman Municipal Authority to further understand plans for renovated market and any efforts made in cost benefit analysis, project cost estimation, build-operate-transfer models, and investor identification beyond and including MOFA. Define potential technical assistance package to accompany development of project

Sellers Association	<p>governmetn investment in this program, given the critical nature of the Techiman Market in both domestic and regional food trade.</p> <p><i>Project contemplated, but investor not yet found. Techiman Municipal Authority may be open to a Build-Operate-Transfer (BOT) scenario.</i></p>	<p>market renovation to focus initially on just the bulk grains market. The Techiman Municipal Authority currently collects 0.30 GHS for each bag of maize (~\$85,000/year) that it currently uses on waste management.</p>	<p>maintenance expense, for an approximate 6.75% annual return .</p> <p>Currently, there are minimal formal user fees in the Techman Market, and minimal services provided. A project could be formulated to both address storage rental, market logistics services, and enable more efficient handling of inbound/outbound loading.</p>	<p>hours/truck), which likely has an impact on transport costs. Lack on freight information center and available market information (prices) Lack of storage space discourages market speculation</p>	<p>plan and marketing of BOT opportunity</p>
<p>REDUCED SHELLING COSTS INITIATIVE WITH PRODUCER ASSOCIATIONS.</p> <p>Potential PPP Partners:</p> <ul style="list-style-type: none"> Ghanaian Producer Associations NGOs such as AfriqueVerte 	<p>On farm shelling and bagging services represent approximately 3% of the final cost of the product. Most farmers argue that they are price takers and there is no competition for these services. A PPP could be considered with local and regional producer associations to support the provisioning of “at cost” shelling services at the farm and village level.</p>	<p>This is an idea generated by the consultant team and needs to be explored further with producer associations and NGOs on the ground in and around Techiman. It would be worthwhile looking further into both demand for this service, and an amortized “at cost” estimate of shelling services to determine if more competitive pricing and increased availability is possible.</p>	<p>Project would likely provide grant money to help in acquisition of shelling machine, in order to generate revenue capacity for producer associations and result in reduced per bag shelling fees paid on farms and in villages.</p>	<p>Reduction in logistics costs at the farmer level would likely have a two-fold effect: Generate greater income for producers Result in lower priced maize in the consolidation market.</p> <p>Any lowering of prices in the Ghanaian market would increase likelihood for gains from regional trade to deficit areas.</p>	<p>Mini-Strategy:</p> <ul style="list-style-type: none"> Consult with USAID/Advance project to determine if any plans already exist to address this issue; Leverage Advance contacts to meet with a selection of Ghanaian Producer Associations to discuss on-farm shelling costs and determine if buy-in exists for partnering in some fashion; In cooperation with one or more producer associations, develop a draft business plan that includes low cost shelling equipment, service provision from association, and appropriate fee structure to recoup costs. Work with producer associations to define financing needs and

					<p>support them in finding financing for this project.</p> <ul style="list-style-type: none"> • Suggest a pilot program to demonstrate results, then more aggressive awareness building with other producer associations
<p>Coordinated manufacturing of lower weight trailers</p> <p>Potential PPP Partners: Association of trailer manufacturers in Kumasi (TBD)</p>	<p>The enforcement of truck weight restrictions has likely resulted in significant increase in per kg transport costs for many products as the practice of overloading decreases. Trailer manufacturer “Obeng Metal Engineering Works” suggested to the Maize T&L Assessment team that there is increased demand from truckers looking for lower-weight chassis and trailers in order to be able to legally accommodate more product.</p> <p>A project could be envisioned to help the 100+ informal trailer manufacturers in the Kumasi area to form an association, and evaluate the feasibility of building new low-weight trailers.</p>	<p>Companies like Obeng Metal Engineering Works may be in a position to invest time and resources into a project designed to help them develop a new product for the market. Their contribution would be both in-kind and cash.</p>	<p>A project that results in both a more formal trailer manufacturers association, and lower-weight trailers on the market could mobilize resources from: Transporters willing to invest in new trailers Decreased per ton transport cost (e.g, if trailer can take 4 more tons, that’s a 10% increase in product on a 40T truck) and could result in equivalent decrease in per ton transport price</p>	<p>Traders in both Techiman, Ouagadougou and other markets confirmed that the load-axel weight restrictions have had a significant impact on the viability of intra-regional trade in maize. Many traders say that per ton costs are now too high for trade to be economically interesting. Beyond the difficult efforts to deregulate the trucking industry, a project that contemplates providing a low-cost, low-weight trailer for bulk-goods transport may have an impact on reducing per ton transport costs and thereby encourage increased intra-regional trade.</p>	<p>Mini-Strategy</p> <ul style="list-style-type: none"> • Consult with both an expert on West African trucking and expert on West African transport policies to vet this idea; • If idea has traction, engage a select number of leaders in the truck engineering profession in Ghana to a workshop to discuss potential a commercial response to load limits; • Use workshop outcomes to drive potential partnership opportunities, including support for formal association in Kumasi • PPP should include feasibility study, technical assistance in re-design of commercially available trailers and chassis, and awareness building. • Leverage relationship with key buyers such as Ghana Grains Council on potential market demand for lighter trucks